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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,660	03/11/2005	David C. Jiles	502963	5224

53609 7590 08/06/2007
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EXAMINER

KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

MAIL DATE	DELIVERY MODE
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08/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,660	Applicant(s) JILES ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 12-14 is/are allowed.
- 6) ☒ Claim(s) 6, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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This action is in response to applicants' amendment of 20 June 2007. The amendments to the specification have overcome the objections to the drawings and the objections to the disclosure and specification. The amendments to the claims have overcome the objection over claim 6 and the 35 USC 112 second paragraph rejections over claims 1, 6-9 and 12. Applicant's arguments with respect to the remaining objections and rejections have been fully considered but they are not persuasive.

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/489,697, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application.

The provisional application only teaches producing manganese substituted cobalt ferrites having the formula $\text{CoMn}_x\text{Fe}_{2-x}\text{O}_4$, where x is 0-1 and $\text{Co}_{1-y}\text{Mn}_y\text{Fe}_2\text{O}_4$, where y is 0-0.8, by mixing powdered oxides of iron, cobalt and manganese, pressing the mixed powders, calcining the pressure body at 1000°C in air for 24 hours, ball milling the calcined material to a size less than 38 microns, recalcining at 1000°C in air for 24 hours, remilling to less than 38 microns, mixing, shaping the mixed powders, sintering the shaped articles at 1350°C for 24 hours in air and cooling the body by air quenching. Thus the provisional application does not provide

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adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for claims 5-14, for the embodiments of claim 1 where M is Cr, Zn, Al, Cu, any mixtures thereof and the combination of any of these metals with manganese, for the ranges in claim 1, the use of carbonates in the process of claim 1 and for the range of greater than 0.8 to about 0.95 in claim 4.

Thus the effective filing date for claims 5 and 7-14 and the embodiments of claim 1 where M is Cr, Zn, Al, Cu, any mixtures thereof and the combination of any of these metals with manganese, for the ranges in claim 1, the use of carbonates in the process of claim 1 and for the range of greater than 0.8 to about 0.95 in claim 4 is 23 July 2004.

The effective filing date of the remaining embodiments of claim 1 and claims 2-4 is 24 July 2003.

The above is not a 35 USC 112 rejection or an objection, but a statement as to what aspects of the claimed subject matter find support in the provisional application. This in turn determines the effective filing dates of the claimed subject matter. If the claimed subject matter is not found in the provisional applicants, then it does not entitled to the benefit of the provisional application's filing date.

The disclosure is objected to because of the following informalities: On page 2, applicants teaches the cobalt ferrite is doped with Mn and other transition element. It is unclear what are these elements since the examples are the transition metals Cr, Zn and Cu and Al, which is not a transition metal. Thus it is unclear as to the meaning of "transition element" since applicants have effectively refined "transition element" from its conventional and traditional meaning due to the inclusion of aluminum. The specification does not give an actual definition as to the meaning of "transition element" and does not give any guidance as to what other elements

besides those exemplified applicants would consider as a "transition element or metal".

Appropriate correction is required.

The amendment filed 20 June 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The insertions on page 8 that the metal substituted into the cobalt ferrite can be any other transition metal besides those specifically stated (Mn, Cr, Zn and Cu).

Applicant is required to cancel the new matter in the reply to this Office Action.

There is no teaching in the original disclosure that the doping metal can be all transitional metals. In the original claims and page 8, applicants redefined "transition metal" as being limited to Mn, Cr, Zn, Cu and Al. While page 2, lines 31-32 states "...Mn or other transition elements such as Cr, Zn, Al or Cu...", this statement does not support the addition that the dopant in cobalt ferrite can be all transition metals since applicants have redefined "transition elements" from its conventional meaning due to the inclusion of aluminum, which is not be conventional definition a transition element of metal, and the specification does not give an actual definition as to the meaning of "transition element" and does not give any guidance as to what other elements besides those exemplified applicants would consider as "transition element". As applicants argued, they can be their own lexicographer, which means the terms in the specification and claims are limited to applicants redefinition. There is no indication in the originally filed disclosure to broaden the definition of "transition metal" to include other metals besides Mn, Al, Cr, Zn and Cu and there is no teaching that applicants' included all transition metals, as they are

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conventional defined. Simply adding aluminum to be included with the metals which are transitional as defined by the conventional and traditional meaning of "transition element of metal" would not redefine the term "transition metal or element" in clear enough terms to justify redefining this phrase counter to its conventional and traditional meaning.

Claims 10 and 11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or rewrite the claims in independent form.

Claims 10 and 11 are directed to produce metal bonded cobalt ferrite composites. Claim 1 is directed to the process of producing a sintered metal substituted cobalt ferrite body, where the is no binder. Thus they are broader in scope than claim 1 and thus do not further limit claim 1.

Applicants state they amended claim 10 to be in independent form, but there are no actual amendments to this claim. The process in claim 1 produces a sintered metal substituted cobalt ferrite, which is different from the composition of claims 10 and 11 which are directed to the process for forming a composite of a metal and the ferrite. There is no indication in claim 1 to show that the process included making composites and the specification indicates that the addition of the metal binder produces a different material than the process of claim 1 on page 3, lines 18-20. In fact figure 2 indicates that the process of claim 1 is one embodiment and that of claim 10 is a different embodiment. Thus applicants' arguments are not convincing and the objection is maintained.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described

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in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification teaches cobalt ferrite is substituted with Cr, Mn, Al, Zn, Cu and mixtures thereof. This teachings does not provide support for claim 6 which states any transition metal is substituted into cobalt ferrite.

The amendments to the claims and the specification do not overcome this reference for the reasons given with respect to the new matter objection and the objection to the disclosure.

Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 11 are directed to produce metal bonded cobalt ferrite composites. Claim 1 is directed to the process of producing a sintered metal substituted cobalt ferrite body, where there is no binder. Thus they are broader in scope than claim 1 and thus are indefinite since they improperly depend from claim 1.

Applicants state they amended claim 10 to be in independent form, but there are no actual amendments to this claim. The process in claim 1 produces a sintered metal substituted cobalt ferrite, which is different from the composition of claims 10 and 11 which are directed to the process for forming a composite of a metal and the ferrite. There is no indication in claim 1 to show that the process included making composites and the specification indicates that the addition of the metal binder produces a different material than the process of claim 1 on page 3, lines 18-20. In fact figure 2 indicates that the process of claim 1 is one embodiment and that of

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claim 10 is a different embodiment. Thus applicants' arguments are not convincing and the rejection is maintained.

Claims 1-5 and 12-14 are allowed over the cited art of record.

Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims are allowable for the reasons given in the previous action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

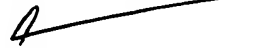
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk
August 3, 2007


C. Melissa Koslow
Primary Examiner
Tech. Center 1700